ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE FINAL PHASE I RFI/RI WORK PLAN FOR OPERABLE UNIT 5 Effective Date: WOMAN CREEK PRIORITY DRAINAGE Organization:

Manual No.: Procedure No.:

Page:

21100-WP-OU 05.1 Table of Contents, Rev7 1 of 2

12/07/94

Environmental Management

### TABLE OF CONTENTS ROCKY FLATS PLANT FINAL PHASE I RFI/RI WORK PLAN WOMAN CREEK PRIORITY DRAINAGE OPERABLE UNIT 5

### VOLUME I

Section No.	<u>Title</u>	Rev. <u>No.</u>	Effective <u>Date</u>
	Detailed Table of Contents		
ES	Executive Summary	1	02/24/92
1.0	Introduction	1	02/24/92
2.0	Preliminary Site Characterization	1	02/24/92
3.0	Applicable or Relevant and Appropriate Requirements	1	02/24/92
4.0	Data Needs and Data Quality Objectives	1	02/24/92
5.0	Phase I RCRA Facility Investigation/ Remedial Investigation Tasks	1	02/24/92
6.0	Schedule	1	02/24/92
7.0	Phase I Field Sampling Plan (FSP)	1	02/24/92
93-DMR-ERM-0034	Modifications to Section 7	1	01/12/94
8.0	Baseline Health Risk Assessment Plan	1	02/24/92
9.0	Environmental Evaluation	1	02/24/92
10.0	Quality Assurance Addendum	1	02/24/92
94-DMR-ERM-0003	Elimination of Daily Inspection	1	01/10/94
11.0	Standard Operating Procedures and Addenda	1	02/24/92
12.0	References	1	02/24/92

Manual No.:	21100-WP-OU 05.1
Procedure No.:	Table of Contents, Rev7
Page:	2 of 2
Effective Date:	12/07/94
	Environmental Management
	Procedure No.:

## VOLUME II

Section No.	<u>Title</u>	Rev. <u>No.</u>	Effective <u>Date</u>
APPA	Appendix A: As Built Drawings for Pond C-2		
	C-2 Dam-General Plan, D 27165-231	А	11/20/79
	C-2 Dam-Cutoff Trench Plan and Dam Profile D 27165-232	А	11/20/79
	C-2 Dam-Embankment & Spillway Details D 27165-235	A	11/20/79
	C-2 Dam-Outlet Works, D 27165-236	Α	11/12/80
	Outlet Works Inlet Structure & Pipe Details D 27165-241	А	11/12/80
	Outlet Works Outlet Structure, D 27165-242	Α	11/12/80
APPB	Appendix B: In Situ Radiological Survey of the Old Landfill	0	08/22/91
APPC	Appendix C: Groundwater Analytical Data	0	08/22/91
APPD	Appendix D: Sediment Analytical Data	0	08/22/91
APPE	Appendix E: Surface Water Analytical Data	0	08/22/91
	VOLUME III, IV, & V		
APPF	Appendix F: Technical Memorandum No. 15: Amended Field Sampling Plan (3 volume set)	0	08/26/94
94-DMR-ERM-0139 •94-DMR-ERM-0142	IHSS 115 & 133 Additional Geotechnical Work Deletion of Constituents	0 0	11/10/94 12/07/94

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Refer to 1-A01-PPG-001 for Processing Instructions.  Print or Type All Information (Except Signatures)			1. Date December 1, 1994	25. 94-DM DMR. No. 94-DM	R-ERM-0142 R-0142 Blueley Lone					
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6. Document Type □ Procedure  7. Document Modification Type (Check only one)  8 Other Work Plan TM □ New □ Revision □ Intent Change ☑ Noninter						nintent Change   Editorial Correction   Cancellation				
8. Item	9. Page	10. Step		<u> </u>		11. Proposed Modifications				
1	2-167	2.6.1.2.2	In last senten	ce of 2nd paragraph:	Delete reference to an	letyn, prometon, prometry	yn, propazine, simazine, sime	ryn, and terbuthylazine.		
	2 of 2 Table 2.6.1.2-3 In table, delete reference to ametyn, prometon, profinetryn, propazine, simazine, simetryn, and terbuthylazine.  12. Justification (Reason for Modification, ΕΙΟ#, ΤΡ#, etc.)  1, 2: Errors were found in the data; units reported in RFEDS were mg/L, but were μg/L in laboratory reports.									
If modifica	ation is for a	new procedure	or a revision, list co	oncurring disciplines in Blo	ck 13, and enter N/A in Blocks	14 and 15. If modification is for a	any type of change or a cancellation, org	anizations are listed in Block 13,		
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Technical Memorandum No. 15 Amended Field Sampling Plan Volume 2 Manual: Section: 21100-WP-OU05.1 2.0, Rev. 0

2-167

Page: Organization:

ER OU 5, 6 & 7 Closures

summaries of the basic data were made for purposes of a critical evaluation of these historical data to determine which water-quality constituents may potentially constitute site contaminants at Pond C-2. The basic data and time series used are presented in EG&G (1994a) and are not reproduced in this document.

For a list of historical RFEDS data at Pond C-2 see Table 2.6.1.2-1. Results of a comparison of results at Pond C-2 for historical data (data collected both as part of sitewide RFP sampling and pond operational sampling) to BUTLs indicated that many water-quality constituents had concentrations higher than the BUTL. A summary of these constituents are presented in Table 2.6.1.2-3. In addition to the field and miscellaneous measurements, radionuclides, trace metals and major cations, selected VOCs, SVOCs, pesticides, and herbicides were detected at concentrations higher than detection limits in water samples from Pond C-2. These constituents included 1,1,1-TCA, acetone, ametryn, atrazine, bis(2-ethylhexyl)phthalate, carbon tetrachloride, methylene chloride, prometon, prometryn, propazine, simazine, simetryn, terbuthylazine, PCE, toluene, total xylenes, and TCE (EG&G, 1993j, Table 4B).

In summary, based upon comparison of historical Pond C-2 water-quality concentration data to BUTLs at RFP for both dissolved and total constituent concentrations, it is concluded that the constituents in Table 2.6.1.2-1 are potential water contaminants at Pond C-2. Further statistical tests will be undertaken to assess, based upon the total database available, if these concentrations actually constitute site contaminants, or if uncertainties in both the actual and background data only make it appear that these concentrations can be concluded to be site contaminants. Some of the uncertainties in the historical data include analysis methods, reporting formats, errors in data reporting, and reporting errors in total versus dissolved concentrations.

# Table 2.6.1.2-3 (cont.): Summary of Constituents Exceeding Background Historical Pond C-2 Water-Quality Constituents

### Pesticides/PCBs

Analyte Name	Detection Limit 3)	No. of Analyses	No. of Detects	Site Min.	Site Max.	Site Avg.	Units
	000 4 0 6			0.18	0:60	0.20	<del>- UOL</del> I
Amerya							
Atrazine	0.05 & 0.5	68	45	0.14	190	4.97	UG/L
				0.70	- 020		<del>UGA</del>
Cyanazine		74	<del></del>	0.50		0.50	
Promoton		57	<del></del>		<del>0:30</del> -	<del>0:10</del>	<del>- UGAL</del>
		57-		0.18	0.60	0.20	- UCAL
Prometryn		2,	•				
Proposino	0.03 & 0.3	57-	<del></del>	<del>0.09</del>	0.30		- UGAL
Simazine	0.06 & 0.6	57_		0.10	0.60	0.20	<del>UC/L</del>
		2.		0.21	0.70	004	
Simetryn		<del>57-</del>	<del></del>	0.21	0.70	0.27	- UG/L
•	0.03 & 0.3	57_		0.09	0.30	0.10	UGAL
Terbuthylazine	- 0.00 ac 0.0	37	J	5.55	5.55		

### Semi-Volatile Organics

Analyte Name	Detection Limit 3)	No. of Analyses	No. of Detects	Site Min.	Site Max.	Site Avg.	Units
Bis(2-Ethylhexyl)Phthalate	10 - 16	18	9	2.00	44.0	11.5	UG/L
DI-n-Butyl Phthalate	10 - 16	18	2	2.30	10.0	9.18	UG/L

### Volatile Organics

	The state of the s	XI 64 L	N SD-man	Site Min.	Site Max.	Site Avg.	Units
Analyte Name	Detection Limit 3)	No. of Analyses	No. of Detects	Offe write	Site Wax.	Site Avg.	Other
1,1-Dichloroethane	4 & 5	115	1	0.20	5.00	4.17	UG/L
1,1,1-Trichloroethane	4 & 5	116	3	0.10	7.00	4.20	UG/L
1,1,2-Trichloroethane	4 & 5	115	1	0.14	5,00	4.17	UG/L
1,1,2,2-Tetrachloroethane	5	115	1	0.10	5.00	4.17	UG/L
1,2-Dichloroethane	4 & 5	115	1	0.10	5.00	4.17	UG/L
1,2-Dichloropropane	5	115	1	0.10	5.00	4.17	UG/L
1,2-Dimethylbenzene	Not Available	50	2	0.20	5.00	3.12	UG/L
2-Butanone	10	96	8	1.00	100	27.3	UG/L
2-Hexanone	10	96	2	1.00	50.0	19.4	U <b>G/L</b>
Acetone	10	95	27	1.00	100	23.2	UG/L
Benzene	5	115	1	0.20	5.00	4.22	UG/L
Bromodichloromethane	5	115	2	0.20	5.00	4.17	UG/L
Carbon Disulfide	5	96	1	2.00	5.00	4.97	U <b>G/L</b>
Carbon Tetrachloride	4 & 5	115	2	0.20	10.0	4.22	UG/L
Chlorobenzene	5	115	2	0.10	5.00	4.25	UG/L
Chloroethane	10	114	1	0.20	10.0	8.29	UG/L
Chloroform	4 & 5	115	3	0.10	5.00	4.14	UG/L
Chloromethane	10	114	1	0.20	10.0	8.34	UG/L
cis-1,3-Dichloropropene	5	115	1	0.10	5.00	4.17	UG/L
Ethylbenzene	5	115	1	0.20	5.00	4.22	UG/L
Methylene Chloride	5	115	19	1.00	12.0	3.97	UG/L
Tetrachloroethene	4 & 5	115	3	0.04	13.0	4.23	UG/L
Toluene	5	115	4	0.20	6.00	4.16	UG/L
Total Xylenes	5	96	5	1.00	6.00	4.91	UG/L
Trichloroethene	4 & 5	114	3	0.04	15.0	4.23	UG/L

<sup>1)</sup> BUTL values from EG&G (1993i).

<sup>2)</sup> If this column contains a value, no BUTL has been calculated for this analyte. The maximum background concentration was used for site to background comprisons.

<sup>3)</sup> Variable or no detection limits are reported for individual analytes.